CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

Division of Measurement Standards Pre-Rulemaking Workshop for Retail Motor-Fuel Devices Equipped with Automatic Temperature Compensation (ATC)

SERVING AND PROTECTING CALIFORNIA'S CONSUMERS, BUSINESSES, ECONOMY, AND ENVIRONMENT

Emergency Procedures and Housekeeping

Evacuation Plan

Pre-Rulemaking Workshop Overview

- Scope and Purpose of Workshop
- Overview of Laws and Regulatory Background
- Commercial Device Regulatory Oversight
- Presentation of draft regulatory text for ATC at retail
- Rulemaking Process and Timeline
- Obtain recommendations and comments to refine and improve the regulatory text prior to formal rulemaking

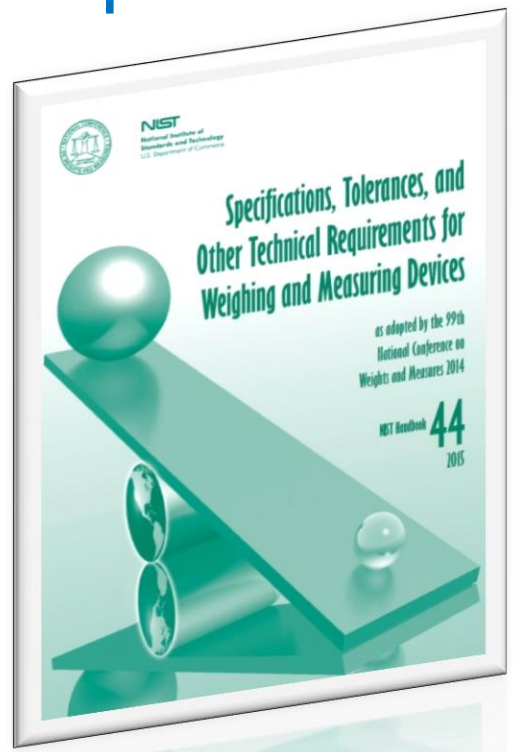
Laws and Regulatory Background

U.S. Weights and Measures Laws and Regulations

- No federal weights and measures laws in the U.S.
- States have individual authority to establish weights and measures laws
- National Conference on Weights and Measures (NCWM) adopts model weights and measures laws to be considered by the states
- NCWM members include state and county officials and industry sector representatives
- Federal government assistance from National Institute of Standards and Technology (NIST) that publishes these model laws

National Institute of Standards and Technology Handbook 44

- Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices
- Used as adopted by the Department for type evaluation of a new device make / model
- Used by counties as a field enforcement manual
- Used by manufacturers when designing new commercial devices



CA Weights and Measures Laws and Regulations

- Law: California Business and Professions Code, Division 5
  http://leginfo.legislature.ca.gov/faces/codes.xhtml
- Regulations: California Code of Regulations, Title 4, Division 9
  http://www.oal.ca.gov/ccr.htm
- Current Rulemaking Activities
  https://www.cdfa.ca.gov/dms/regulations.html

Device Requirements Adoption

1. Business and Professions Code, Division 5, Section 12107 adopts the latest publication of NIST Handbook 44 by reference
   - Examples: gas pumps, grocery scales, liquid-measuring devices
2. Section 12107 also authorizes addition, modification, or rejection by regulation adopted by the secretary
   - Examples: electric watthour meters (utility submeters), hydrogen dispensers, liquid-measuring devices

Advertising and Labeling Requirements Adoption

1. Business and Professions Code, Division 5, Chapter 14, Articles 8 and 9 establish the labeling requirements for retail motor-fuel devices.

2. Business and Professions Code, Division 5, Chapter 14, Article 12 establishes the price sign advertising requirements for retail motor-fuels.

Device Compliance Program

California System of Weights and Measures

- Division of Measurement Standards
  - Maintains standards (mass, length, volume, electric current, etc.), evaluates new types of measuring devices, oversees work performed by counties
- 55 county weights and measures jurisdictions
  - County officials perform the majority of all field inspections in their jurisdiction

Commercial Retail Motor-Fuel Devices Equipped with Automatic Temperature Compensation (ATC)

- NIST Handbook 44 Requirements:
  - Section 3.30 Liquid-Measuring Devices
  - Addresses requirements for wholesale motor-fuel devices equipped with ATC, but DOES NOT address requirements for retail motor-fuel devices equipped with ATC
  - No California regulations exist regarding ATC at retail
- Draft regulation would provide the framework for all affected parties regarding ATC at retail

Commercial Retail Motor-Fuel Devices Equipped with Automatic Temperature Compensation (ATC)

- Purpose of this rulemaking
  - Improved accuracy
  - Establish a statewide standard reference specific gravity for gasoline and diesel
  - Establish specifications, tolerances, and other technical requirements for retail motor-fuel devices equipped with ATC
- Permissive regulation

DRAFT Regulatory Text

DRAFT Changes to CCR, Title 4, Division 9

Chapter 1, § 4000. Application.

- Adopts by reference the latest publication of NIST Handbook 44

Chapter 1, § 4001. Exceptions.

- Adopts California-specific exceptions to language adopted in § 4000

Chapter 1, § 4002.8. Liquid-Measuring Devices. (3.30.)

- Adopts California-specific additions to language in § 4000

Chapter 7, Advertising and Labeling of Gasoline and Other Motor Vehicle Fuels

- Edits to §§ 4200, 4200.1, 4201.1, and 4205

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4001. Exceptions.

S.2.8. Exhaustion of Supply, Lubricant Devices Other than Meter Types.

N.4.1.1. Wholesale Devices Equipped ~~With~~ with Automatic Temperature Compensating Systems.

N.5. Temperature Correction on Wholesale Devices.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4001. Exceptions. (cont.)
Appendix D. Definitions for:

Automatic Temperature or Density Compensation

Remanufactured Element.

~~Remanufactured Element.~~

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.)

S.1.6.7.1 Recorded Representations, Retail Motor-Fuel Device Equipped with Automatic Temperature Compensation. – In addition to the requirements in S.1.6.7 Recorded Representations., a printed receipt issued by a retail motor-fuel dispenser equipped with an automatic temperature compensator shall state the following:

(a) "Temperature Compensated" or

(b) "Temp. Comp."

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

S.2.8. Retail Motor-Fuel Devices Equipped with Automatic Temperature Compensators.

S.2.8.1. Automatic Temperature Compensation. – A device may be equipped with an automatic means for adjusting the indication and registration of the measured volume of product to the volume at 15 °C (60 °F).

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

S.2.8.2. Provision for Deactivating. – On a device equipped with an automatic temperature-compensating mechanism that will indicate or record in terms of liters or gallons compensated to 15 °C (60 °F), provision shall be made for deactivating the automatic temperature-compensating mechanism so that the meter can indicate and record, if it is equipped to record, in terms of the uncompensated volume.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

S.2.8.3. Provision for Sealing Automatic Temperature-Compensating Systems – Provision shall be made for applying security seals in such a manner that an automatic temperature-compensating system cannot be disconnected and that no adjustment may be made to the system without breaking the seal.

S.2.8.4. Temperature Determination with Automatic Temperature-Compensation – For test purposes, means shall be provided (e.g., thermometer well) to determine the temperature of the liquid either:

(a) in the liquid chamber of the meter; or

(b) immediately adjacent to the meter in the meter inlet or discharge line.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

S.2.9. Exhaustion of Supply, Lubricant Devices Other than Meter Types. – When the level of the supply of lubricant becomes so low as to compromise the accuracy of measurement, the device shall:

(a) automatically become inoperable; or

(b) give a conspicuous and distinct warning.

S.4.4.3. Temperature Compensation for Retail Motor-Fuel Devices. – If a device is equipped with an automatic temperature compensation, the primary indicating elements, recording elements, and recorded representation shall be clearly and conspicuously marked to show that the volume delivered has been adjusted to the volume at 15 °C (60 °F).

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

~~(a)~~ N.4.1.1 Wholesale Devices and Retail Motor-Fuel Devices Equipped ~~With~~ with Automatic Temperature Compensating Systems. – On wholesale devices and retail motor-fuel devices equipped with automatic temperature compensating systems, normal tests:

(~~1~~a) shall be conducted with the temperature compensating system connected and operating by comparing the compensated volume indicated or recorded to the actual delivered volume corrected to 60°F, and

(~~2~~b) may be conducted with the temperature compensating system deactivated by comparing the uncompensated volume indicated or recorded to the actual delivered volume.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

The first test shall be performed with the automatic temperature compensating system operating in the "as found" condition.

On devices that indicate or record both the compensated and uncompensated volume for each delivery, the tests in (~~1~~a) and (~~2~~b) may be performed as a single test.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

N.5. Temperature Correction on Wholesale Devices and Retail Motor-Fuel Devices. – Corrections shall be made for any changes in volume resulting from the differences in liquid temperatures between time of passage through the meter and time of volumetric determination in the prover. When adjustments are necessary, appropriate petroleum measurement tables should be used.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

UR.3.7. Temperature Compensation, Retail Motor-Fuel Devices.

UR.3.7.1. Automatic Temperature-Compensator. – If a device is equipped with an automatic temperature compensator, it shall be connected, operable, and in use at all times. An automatic temperature-compensating system shall not be removed, nor shall a compensated device be replaced with an uncompensated device, without the written approval of the responsible weights and measures jurisdiction.

Note: This requirement does not specify the method of sale for product measured through a meter.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

UR.3.7.2. Recorded Representations. – A printed receipt based on a reading of a retail motor-fuel device equipped with an automatic temperature compensator shall show that the volume delivered has been adjusted to the volume at 15 °C (60 °F), e.g., Temperature Compensated or Temp. Comp.

UR.3.7.3. Reference Fuel Densities for Automatic Temperature Correction. – The fuel density values used to determine corrected volume for retail motor-fuel dispensers equipped with automatic temperature compensation shall be those listed in Table 3. Fuel Densities for Automatic Temperature Correction.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

Table 3. Fuel Densities for Automatic Temperature Correction	
Fuel	**Standard Fuel Density for Retail Transactions**
Gasoline, gasoline-oxygenate blends (3.7 mass percent oxygen, maximum), gasoline ethanol blends (10 volume percent maximum)	745 kg/m^3
Diesel fuel (grade 2-D), biodiesel blends (20 volume percent biodiesel, maximum), renewable diesel fuel	850 kg/m^3

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

UR.3.7.4. Period of Use. – When fuel is bought or sold on an automatic temperature compensated basis, it shall be bought or sold using this method over at least a consecutive 12-month period.

UR.3.7.5. Automatic Temperature Compensation at a Single Place of Business – When retail motor-fuel dispensers equipped with automatic temperature compensators are operated at a single place of business, all the dispensers at that location shall be equipped with automatic temperature compensators.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 1

§ 4002.8. Liquid-Measuring Devices. (3.30.) – (cont.)

Appendix D. Definitions

automatic temperature or density compensation. – The use of integrated or ancillary equipment to obtain from the output of a volumetric meter an equivalent mass, or an equivalent liquid volume at the assigned reference temperature below and a pressure of 14.696 lb/in^2 absolute.

Cryogenic liquids: 21 °C (70 °F) [3.34]

Hydrocarbon gas vapor: 15 °C (60 °F) [3.33]

Liquid carbon dioxide: 21 °C (70 °F) [3.38]

Liquefied petroleum gas (LPG) and Anhydrous ammonia: 15 °C (60 °F) [3.32]

Liquid fuels and lubricants: 15 °C (60 °F) [3.30]

DRAFT Changes to CCR, Title 4, Division 9, Chapter 7

§ 4200. Advertising Medium.

(a) "Advertising medium," as used in this chapter, includes banner, sign, placard, poster, streamer and card, whether or not mounted, whether appearing on the same or different standards, or whether or not physically connected with each other; provided, the advertised statements can reasonably be read as one advertising message.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 7

§ 4200. Advertising Medium.

(b) In addition to the requirements of this section and Section 13532, Business and Professions Code, when gasoline or other motor vehicle fuel is sold on a temperature compensated basis at a location, all advertising mediums shall include the words “Temperature Compensated” or “Temp. Comp.” for all prices and grades of gasoline or motor vehicle fuel sold at that location.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 7

§ 4200. Advertising Medium.

(1) The words “Temperature Compensated” or “Temp. Comp.” shall be displayed on the advertising medium in letters not less than one-third the size of the numerals designating the price.

(2) All sales of fuel on a temperature compensated basis at a location shall be advertised as such for at least a consecutive 12-month period.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 7

§ 4200. Advertising Medium.

(c) For purposes of this chapter, automatic temperature compensation requirements apply only to the following motor vehicle fuel products: gasoline, gasoline-oxygenate blends (3.7 mass percent oxygen, maximum), gasoline ethanol blends (10 volume percent maximum), diesel fuel (grade 2-D), biodiesel blends (20 volume percent biodiesel, maximum), and renewable diesel fuel.

Note: Authority cited: Sections 12027, Business and Professions Code. Reference: Sections 13531, 13532, 13534, 13535, 13536, 13537, 13538, 13539, and 13540, Business and Professions Code.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 7

§ 4200.1. Illumination.

In addition to the requirements of Section 13536, Business and Professions Code, when any advertising message is illuminated, the entire message shall be uniformly illuminated.

Note: Authority cited: Section 12027, Business and Professions Code. Reference: Section 13536, Business and Professions Code.

DRAFT Changes to CCR, Title 4, Division 9, Chapter 7

§ 4201.1. Labeling on Dispensing Apparatus Equipped with Automatic Temperature Compensation.

In addition to Section 4201, when motor vehicle fuel is sold on a temperature compensated basis, the dispenser shall be labeled with the words “Temperature Compensated to 15 °C (60 °F)” or “Temp Comp to 15 °C (60 °F)” in letters and numerals not less than one-half inch (12.70 mm) in height and one-sixteenth inch (1.59 mm) in width.

Note: Authority cited: Section 12027, Business and Professions Code. Reference: Sections 13470 and 13480, Business and Professions Code.

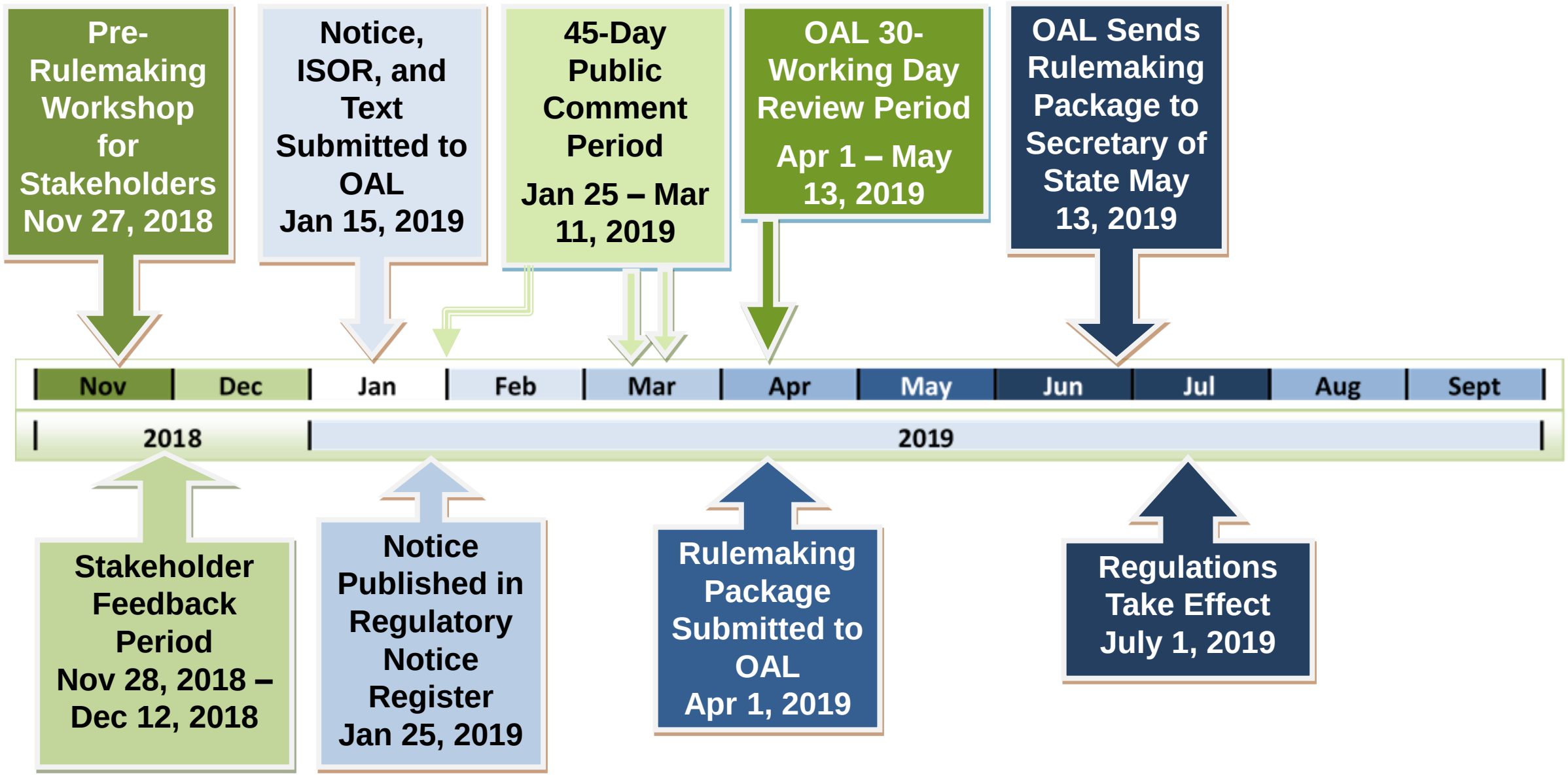
DRAFT Changes to CCR, Title 4, Division 9, Chapter 7

~~§ 4205. Illumination.~~

~~In addition to the requirements of Section 13536, Business and Professions Code, when any advertising message is illuminated, the entire message shall be uniformly illuminated.~~

~~Note: Authority cited: Section 12027, Business and Professions Code. Reference: Section 13536, Business and Professions Code.~~

Process and Timeline



Stakeholder Questions and Comments

Thank You for Your Participation!

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